

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

United States Department of Agriculture, FOREST SERVICE.

GIFFORD PINCHOT, Forester.

SILVICAL LEAFLET 39.

MONTEREY PINE.

Pinus radiata Don.

Monterey pine is a tree of limited distribution and of little commercial importance. It has some value, however, on account of its ability to grow rapidly on the sterile sand barrens of the California coast, where it often forms dense, pure stands. The wood is not of high quality.

RANGE AND OCCURRENCE.

This pine is found only locally along the coast of central California and the adjacent islands, and on Guadalupe Island off Lower California.

It grows only at low elevations of between 2,000 and 4,000 feet. It extends less than 10 miles inland and is not found on flats or low land, nor in the gulches, but keeps to slopes, bluffs, and ridges.

CLIMATE.

The seasonal range of temperature characteristic of its habitat is between 25° and 95° F. The annual precipitation averages not more than 17 inches, entirely in the form of rain. Close proximity to the sea keeps the air humid, and at least a third of the days are cloudy or foggy.

ASSOCIATED SPECIES.

At the coast it is occasionally mixed with Monterey and Gowen cypress. Inland it forms interrupted, pure forests, but is occasionally mixed with California swamp pine in moist places.

HABIT.

It is usually a moderately large tree, from 80 to 100 feet tall and from 2 to 3 feet in diameter. Occasionally it is 5 or 6 feet in diameter. On the sand barrens it is shorter lived and only from 20 to 40 feet high. In close stands the bole is straight and clear with little taper. The crown is composed of thick, spreading limbs, which form a narrow, irregular, round-topped head. The bark is black, very hard, and 2 to 3 inches thick. It affords the tree good protection against fire.

Monterey pine is very rapid in growth, even on poor, sandy soils. This is due to the almost continuous growing season, which offsets the influence of the soil.

SOIL AND MOISTURE.

It does well on sand along the sea shore, but also succeeds on heavier soils farther inland. It is short lived in arid situations, although it does not thrive on wet soils.

TOLERANCE.

It is very tolerant, and occurs normally in pure, dense stands, in which it cleans itself well. Such stands maintain a good crown cover under which the accumulation of humus is rapid. Isolated trees retain their branches to old age and preserve a heavy foliage similar to that of white pine.

REPRODUCTION.

Seed production begins early and occurs annually. The cones are persistent, remain closed for several years, and are often opened through the agency of fire. Fires are commonly followed by dense stands of reproduction which bear a resemblance to reproduction of lodgepole after fire. The seeds are winged and suited for wind distribution. Without the assistance of fire, reproduction of this species is usually scattered, and confined to mineral soil with little humus.

